

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC1  
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## **Comment on nhess-2022-143**

Guoqing Zhang (Referee)

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Referee comment on "Progress and challenges in glacial lake outburst flood research (2017–2021): a research community perspective" by Adam Emmer et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2022-143-RC1>, 2022

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In this study, the authors reveal the current progress and challenges of glacial lake outburst flood research in recent five years (2017–2021) launched from the first GLOF conference (7–9 July 2021, online). This analysis was based on the collections of 570 peer-reviewed GLOF studies published in 2017–2021 (Web of Science and Scopus databases). Four thematic areas related with GLOFs were summarized. This study is interesting and this manuscript was presented well. I recommend this manuscript was to publish in NHES with the further improvement of the suggested comments below.

Major comments:

1) The papers published in 2021 were collected fully? The number of papers in 2021 is smaller than 2020, the search was performed in March 2022. Some papers published in 2021 have a delay to update, especially after March 2022. I suggest the authors to update the number of papers published in 2021. In addition, some papers in Discussion/Preprint status were included in the statistics? The status of these papers can be changed and this could affect the final results.

2) How about the current progress by different countries? The reader could be interesting the trend of leader authors from the different countries, especially in high mountain regions from the developing countries status?

3) The description of statistics of published papers is clear. However, the key finding of this study is the current progress and challenges of GLOF. At present, these are mainly described in text. It is possible to add some schematic diagrams to display these directly?

Specific comments:

1) Table 1. The classifications of four thematic areas are considered in Table 1?

2) Figure 1 need to be improved for publication.

3) Table 2 need to be redesigned for readable. This table is too long, and sources can be separated in a new column.

4) Page 17, L300: "(e.g., Aggarwal et al., 2017; Muneeb et al., 2021)" suggested references here: doi: 10.3389/feart.2021.775195

5) Page 17, L305: please decrease the number of papers cited at one place. You can separate it at several places. Others need similar corrections.

6) Page 17, L315: "On local scale, a recent trend goes toward better understanding of controls, preconditions, triggers of, and interactions during individual GLOFs (Carrivick et al., 2017; Blauvelt et al., 2020; Vilca et al., 2021)," suggested references here: doi: 10.5194/tc-15-4145-2021; doi: 10.1017/jog.2019.13

7) Page 19, L360: Allen et al., 2016; Schwanghart et al.,2016; Allen et al., 2019 -> Allen et al., 2016, 2019; Schwanghart et al.,2016. Others need similar corrections.